



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW308A  
 UNIQUE ID NUMBER: 01P07PW145  
 COMBUSTOR: Annular  
 ENGINE TYPE: MTF

BYPASS RATIO: 4.1  
 PRESSURE RATIO ( $\pi_{00}$ ): 20.4  
 RATED THRUST ( $F_{00}$ ) (kN): 30.7

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	17.5	99.6	44.8	17.1
AS % OF ORIGINAL LIMIT	89.3	84.4	55.4	52.3
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			69.3	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			70.2	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			70.7	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			74.9	

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
 x DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 - OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	0.360	0.00	0.83	16.74	15.0
CLIMB OUT	85	2.2	0.299	0.00	1.06	14.06	15.0
APPROACH	30	4.0	0.124	0.02	4.08	8.03	2.5
IDLE	7	26.0	0.045	6.62	38.21	3.65	1.7
LTO TOTAL FUEL (kg) or EMISSIONS (g)			154	460	2828	1300	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				15.0	92.1	42.3	15.1
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				14.4-15.88	87.17-98.01	41.21-42.94	15-15.3

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	99.4-103
TEMPERATURE (K)	280-296
ABS HUMIDITY (kg/kg)	0.0028-0.009

### FUEL

SPEC	Jet A-1
H/C	1.85-1.87
AROM (%)	19.5-21.5

MANUFACTURER: Pratt & Whitney Canada  
 TEST ORGANIZATION: PW308 Development Engineering  
 TEST LOCATION: Mississauga, Ontario, Canada  
 TEST DATES: 15/04/2000-05/09/2000

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
x	2.3.2 d) (CAEP/6)
	2.3.2 e) (CAEP/8)

### REMARKS

- P&WC ER 3967
- Engines E9608/01, E9606/04, E9609/01
- Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
- NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

Compliance with Fuel Venting requirements: -

('x' if complies, 'PR' if pre-regulation, '-' if information is not available)